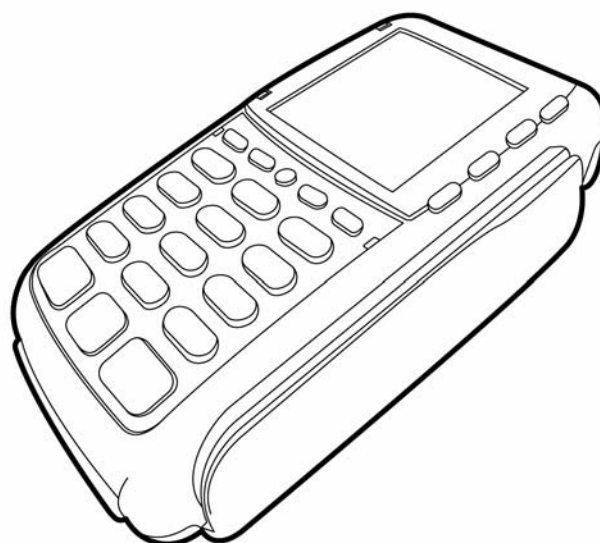


V^x810

Installation Guide



VX810 Installation Guide

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VeriFone Part Number 24963, Revision B



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This guide is the primary source of information for setting up and installing V^x810.

Audience

This guide provides simple descriptions of V^x810 features, as well as basic information for the installation and configuration of the V^x810.

Organization

This guide is organized as follows:

[Chapter 1, Overview](#). Provides an overview of the V^x810.

[Chapter 2, Setup](#). Explains setup and installation of V^x810, selecting a location and establishing connections with other devices.

[Chapter 3, Specifications](#). Discusses power requirements and dimensions of the V^x810.

[Chapter 4, Maintenance and Cleaning](#). Explains maintenance of the V^x810.

[Chapter 5, Service and Support](#). Provides information on contacting your VeriFone service provider and information on how to order accessories or documentations from VeriFone.

[Chapter 6, Troubleshooting Guidelines](#). Provides troubleshooting guidelines should you encounter a problem in terminal installation and configuration.

Related Documentation

To learn more about V^x810, refer to the following set of documents:

V ^x 810 Certification and Regulation Sheet	VPN 24960
V ^x 810 Quick Installation Guide	VPN 24961
V ^x 810 Reference Guide	VPN 24964
V ^x 810 Privacy Shield Quick Installation Guide	VPN 24965
V ^x 810 Stand Adapter Quick Installation Guide	VPN 24966
V ^x 810 CTLS Quick Installation Guide	VPN 28601

Guide Conventions

Various conventions are used to help you quickly identify special formatting. Table 1 describes these conventions and provides examples of their use.

Table 1 Document Conventions

Convention	Meaning	Example
Blue	Text in blue indicates terms that are cross references.	See Guide Conventions .
<i>Italics</i>	Italic typeface indicates book titles or emphasis.	You <i>must</i> not use this unit underwater.
NOTE 	The pencil icon is used to highlight important information.	RS232-type devices do not work on the V*810 communication port.
CAUTION 	The caution symbol indicates hardware or software failure, or loss of data.	The unit is not waterproof or dustproof, and is intended for indoor use only.
WARNING 	The lightning symbol is used as a warning when bodily injury might occur.	Due to risk of shock do not use the terminal near water.

Acronym Definitions

Various acronyms are used in place of the full definition. Table 2 presents acronyms and their definitions.

Table 2 Acronym Definitions

Acronym	Definitions
AES	Advanced Encryption Standard Algorithm
API	Application Programming Interface
ARM	Advanced RISC Machines
CAPK	Certification Authority Public Key as in the EMV standard
CBC	Cipher Block Chaining mode, as defined in ANSI X3.106
COG	Chip on Glass
COGS	Cost of Goods Sold
CTS	Clear to Send
DEA/DES	Data Encryption Algorithm/Standard, as defined in ANSI X3.92
DUKPT	Derived Unique Key Per Transaction Method as defined in the VISA's POS Equipment Requirement: PIN processing and Data Authentication, International Version 1.0, August 1988
ECB	Electronic Code Book mode, as defined in ANSI X3.106
ECR	Electronic Cash Register
EMV	Joint Europay, MasterCard and Visa Standard
ERS	Engineering Requirements Specification

Table 2 **Acronym Definitions** (continued)

Acronym	Definitions
GID	Group Identifier - Concept inherited from Verix terminals file system
HDLC	High-level Data Link Control
ICC	Integrated Chip Card (Smart Card)
LCD	Liquid Crystal Display
MAC	Message Authentication Code, as defined in ANSI X9.19
MMU	Memory Management Unit
MSAM	Multiple Secure Access Module
MSR	Magnetic Stripe Reader
OS	Operating System
PED	PIN Entry Device
PIN	Personal Identification Number
POS	Point-of-Sale
PRD	Product Requirement Document
PSCR	Primary Smart Card Reader
RFID	Radio Frequency Identification
RTS	Ready to Send
SOC	System on Chip
SAM	Secure Access Module
SC	Smart Card (Integrated Chip Card)
SD	Secure Digital
SDK	Software Development Kit
SL3	Security Level 3 and 4
SR	Ship Release
SRAM	Static Random Access Memory
STN	Super Twisted Nematic
UI	User Interface
USB	Universal Serial Bus
VSS	VeriShield Security Scripts

Overview

This chapter provides a brief description of VeriFone's V^x810.

V^x810 PIN pad

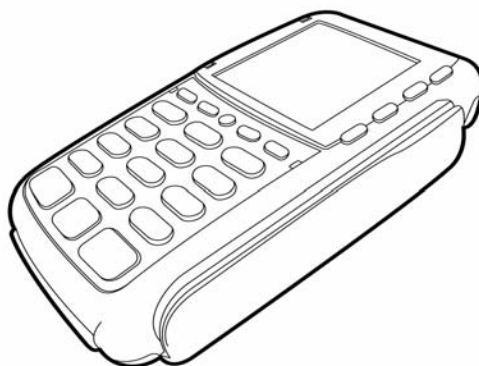
The V^x810 is a PIN pad with an integrated smart card reader for connection to either VeriFone transaction terminals or third party electronic point-of-sale systems, offering advanced security and smart card processing capabilities.

The V^x810 series supports both symmetric encryption algorithms (DES, 3DES, and AES) and asymmetric encryption (RSA). This device internally manages simultaneous multiple keys through either Master Session- or DUKPT-based processes, and offers high performance smart card processing, as well as support for the new generation of 3-volt cards.

The V^x810 is a programmable device, allowing a custom or EMV-approved transaction application to run from the VISA PCI-compliant PIN pad, either to meet local regulatory requirements or relieve the ECR or terminal of this task.

Features at a Glance

The V^x810 has a sleek and stylish ergonomic design that offers power and performance in a smart card- or MSR-integrated PIN pad device. The V^x810 provides the right combination of features and functions in a sleek, stylish device that fits in the palm of your hand. This includes a magnetic stripe card reader, smart card reader, and integrated PIN pad.



- Delivers **power** and **usability** in a **convenient** hand-held design.
- Securely supports and runs **payment** and **value-added applications**.
- Offers **unsurpassed performance** on **EMV** smart card transactions.
- **Security** architecture meets specifications for PIN-entry devices (PCI) and sophisticated **file authentication**.

Figure 1 **V^x810 with new handheld design**

Features and Benefits

Exceptional Ease of Use

- Bold, ergonomic design is sleek, stylish, and lightweight for conveniently handing the unit to the consumer for PIN entry or other input.
- Intuitive telco-style interface and large, colored control keys simplify training and reduce support requests.
- Highly readable display handles multiple languages for global applications.

Critical Security Protection

- Incorporates tamper-detection circuitry to resist unauthorized intrusion and supports a broad spectrum of software-based security features.
- Integrated security modules simultaneously support sophisticated encryption (AES, DES, 3DES, RSA) and key management schemes, including single and 3DES Master Session, single, and 3DES Derived.

Strong Feature Set

- Ensures uncompromising reliability from VeriFone, the worldwide leader in e-payment.
- Primary smart card reader support for synchronous and asynchronous smart cards.
- Support for international character sets and Unicode standard.
- The V^x810 received EMV Level 1 approval for smart card solutions.
- VeriShield security architecture provides sophisticated file authentication to prevent execution of unauthorized software on the V^x810.

Extended PIN pad Capabilities

- Optional privacy shield.
- Display backlighting for use in low-light or high-glare environments.
- Triple-track, high-coercivity card reader handles most magnetic stripe cards.
- Three Security Access Modules (SAMs) safeguard sensitive financial data and support multiple smart card schemes.
- Optional contactless module enhancement.
- Can be combined with V^x810 DUET to provide a complete counter top payment solution.
- Can be powered by other V^x series terminals through the multi-connector cable.



CHAPTER 2

Setup

This chapter describes the setup procedure for V^x810, in the following sections:

- Select Location
- Unpack Shipping Carton
- Examine V^x810 Features
- Install/Replace MSAM Cards
- Privacy Shield
- Cable Connections
- Power Supply
- Smart Card Reader Use
- Magnetic Card Reader Use

Select Location

Use the following guidelines to select a location for the V^x810.

Ease of Use

- Select a location convenient for both merchant and cardholder.
- Select a flat support surface, such as a countertop or table.
- Select a location near a power outlet and the terminal, ECR, or computer connected to the V^x810. For safety, do not string cables or cords across a walkway.

Environmental Factors

- Do not use the unit where there is high heat, dust, humidity, moisture, or caustic chemicals or oils.
- Keep the unit away from direct sunlight and anything that radiates heat, such as a stove or a motor.
- Do not use the V^x810 outdoors.



The V^x810 is not waterproof or dustproof, and is intended for indoor use only. Any damage to the unit from exposure to rain or dust can void any warranty.

Electrical Considerations

- Avoid using this product during electrical storms.
- Avoid locations near electrical appliances or other devices that cause excessive voltage fluctuations or emit electrical noise (for example, air conditioners, electric motors, neon signs, high-frequency or magnetic security devices, or computer equipment).
- Do not use the V×810 near water or in moist conditions.

WARNING



Due to risk of shock or damage, do not use the V×810 near water, including a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool.

Unpack Shipping Carton

Open the shipping carton and carefully inspect its contents for possible tampering or shipping damage. The V×810 is a secure product and any tampering can cause it to cease to function or to operate in an unsecured manner.

- 1 Remove and inspect the contents of the shipping carton, since the V×810 ships in multiple configurations, the carton may include any or all of the following:
 - V×810
 - Data cable
 - Power pack
 - Power cord
 - ECR cable
 - Privacy shield
- 2 Remove all plastic wrapping from the terminal and components.
- 3 Remove the clear protective film from the display.
- 4 Save the shipping carton and packing material for future repacking or moving of the device.

WARNING



Do not use a unit that has been tampered with or damaged.

The V×810 comes equipped with tamper-evident labels. If a label or component appears damaged, please notify the shipping company and your VeriFone service provider immediately.

Examine V^x810 Features

Before you continue with the installation process, familiarize yourself with the V^x810 features:

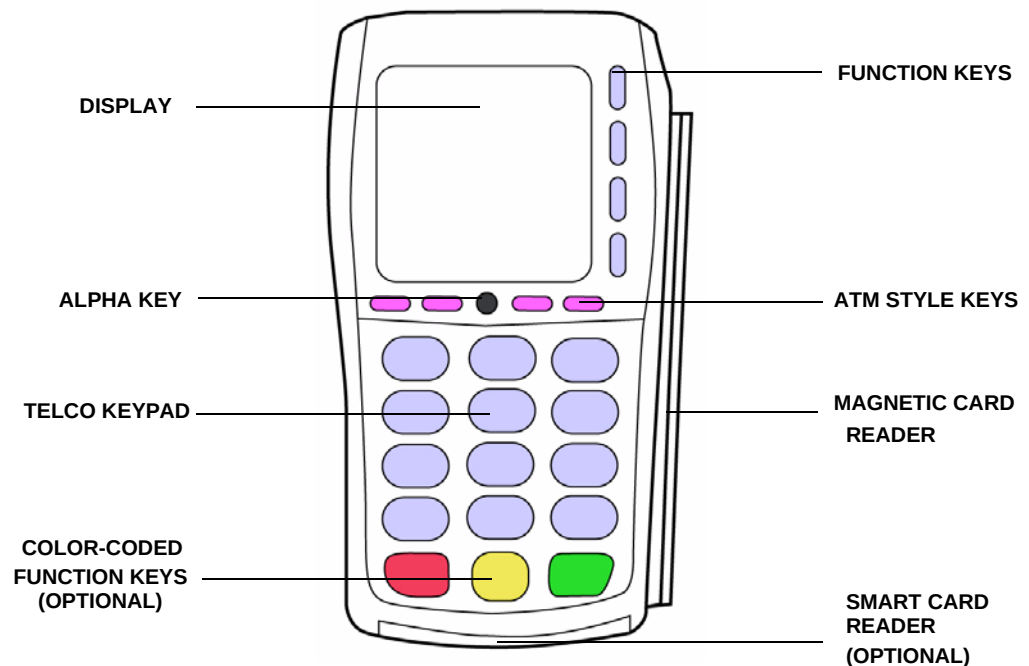


Figure 2 V^x810 Features

The V^x810 includes the following features:

- A **display**.
- Three types of keys:
- Keypad matrix for **four ATM-style** keys and **four Function** keys.
- **Alpha** key for entering text.
- Three **color-coded function keys** below the keypad (CANCEL [RED], BACKSPACE [YELLOW], ENTER [GREEN]).
- A **magnetic card reader**, built into the top side. An icon shows the proper swipe direction, with the stripe facing down and towards the keypad.
- A **smart card reader**, built into the unit's front side. An icon indicates the proper card position and insertion direction. (Optional)
- A **SAM (Security Access Module) compartment**, built into the back side of the unit. The V^x810 contains multiple-SAM (MSAM) cardholders to support multiple stored-value card programs or other merchant card requirements. (Optional)

Install/Replace MSAM Cards

You may need to install one or more multiple security access module (MSAM) cards or replace the old cards.



CAUTION Observe standard precautions in handling electrostatically sensitive devices. Electrostatic discharges can damage the equipment. VeriFone recommends using a grounded anti-static wrist strap.

To change or install MSAMs

- 1 Remove the data cable from the back of the unit.
- 2 Place the V×810 facedown on a soft, clean surface to protect the lens from scratches.
- 3 Loosen the retaining screw. The restraining screw is captive, which means that it cannot be fully removed from the slot.

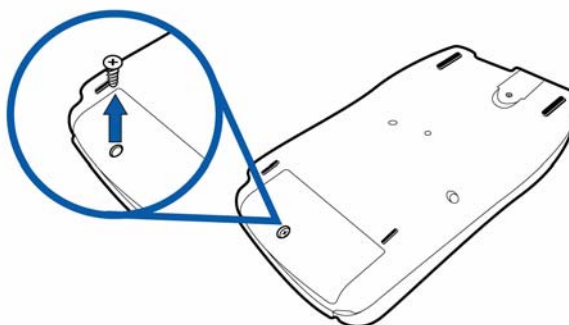


Figure 3 MSAM Compartment Door and Locking Screw

- 4 Lift open the compartment door. The MSAM cardholders are now accessible. Each cardholder consists of a slot inboard of a numbered tray.

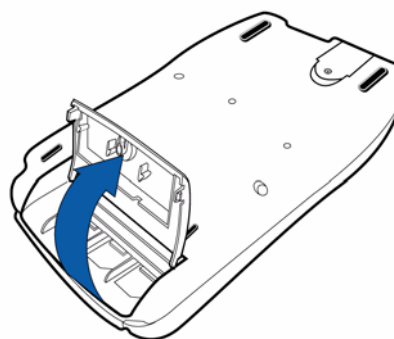


Figure 4 Opening MSAM Compartment Door



NOTE Before inserting the MSAM card, position it as shown in [Figure 5](#), with the card's gold contacts facing away from you, toward the unit. The cardholder slot in the V×810 has a set of contacts. The MSAM card has a notch on one corner to ensure that it fits into the connector base in only one way; the V×810 has a matching notch cast into the backside of the MSAM compartment door to ensure the MSAM card is positioned correctly when the cover is closed.

- 5 Install the MSAM card by aligning the card to match the embossed number and carefully sliding it into the slots until fully inserted.

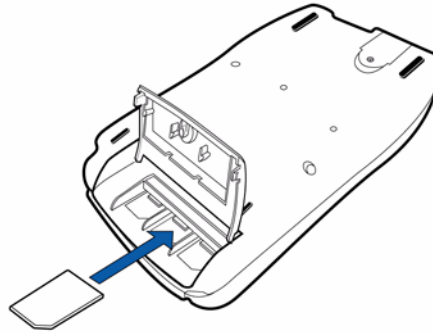


Figure 5 MSAM Insertion

- 6 Close the MSAM compartment door and tighten the locking screw.

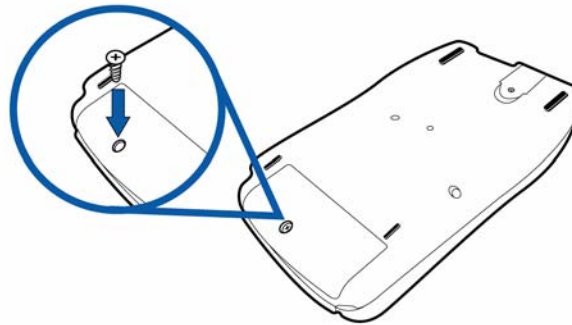


Figure 6 Closed MSAM Compartment

Privacy Shield

This figure shows an example of a Vx810 with the privacy shield installed.



Figure 7 **Installed Privacy Shield**

Cable Connections

The Vx810 has six general cabling scenarios, depending on what the Vx810 connects to:

- 1 Connection to another VeriFone Terminal
- 2 RS232 Connection using an External Power Brick
- 3 Direct USB Connection
- 4 USB–Download Support using an External Power Brick
- 5 Terminal using a PoweredUSB connection
- 6 Ethernet Connection with External Power Brick



CAUTION Using an incorrectly rated power supply can damage the unit or cause it not to work properly. Use only a power pack with VPN CPS11212-3A-(R) (see [Specifications](#) for detailed power supply specifications).

Connection to another VeriFone Terminal

The V^x810 connects to a VeriFone terminal via a straight cable. There is a minimum power requirement for the V^x810, currently specified as 3.5W. In cases where the terminal is only able to provide a 7 V DC output to power the V^x810, the terminal must be able to source at least 0.5 A of current. Otherwise, proper functioning of the V^x810 is not guaranteed.

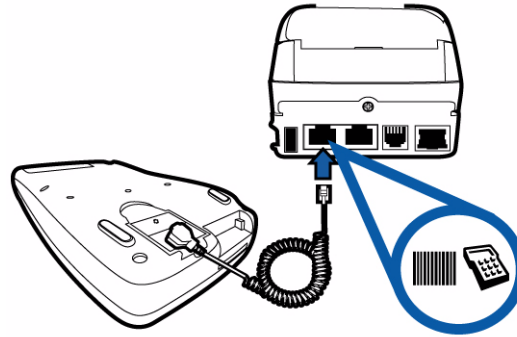


Figure 8 V^x810 Connected to Another VeriFone Terminal

RS232 Connection using an External Power Brick

A special dongle cable is used, where one end of the cable plugs into the V^x810 while the other end terminates in a DB-9 connector housing. On the housing, a DC jack is provided to connect to an external power brick. This is a generic cable for all RS232-based hosts.



Figure 9 V^x810 with an RS232 Connection Using an External Power Brick

Direct USB Connection

Similarly, a dongle cable is required in standard USB environments. For this cable option, the host end has a molded housing which exposes the standard USB plug.

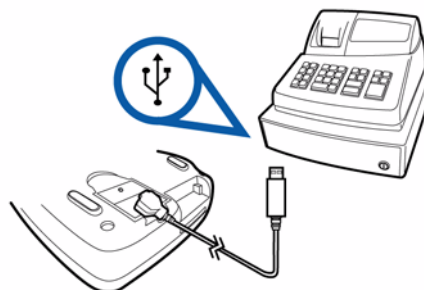


Figure 10 Direct USB Connection

USB-Download Support using an External Power Brick

This cable option comes with a junction box that provides a mini-style Type B USB socket for connecting to the USB-based host and a DC jack for external power connection.

In addition, a Type A USB socket is provided on the junction box to support application download via a USB thumb drive.

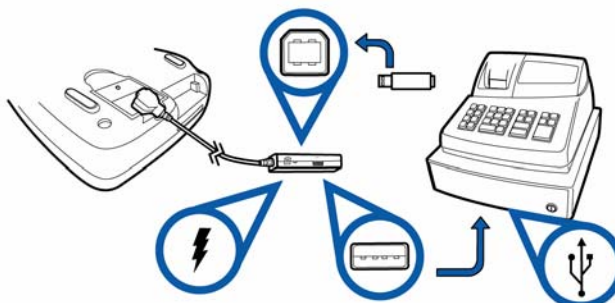


Figure 11 V×810 Connected to a USB with Download Support

Terminal using a PoweredUSB connection

For a USB-based host with PoweredUSB feature, a straight cable is all that is required. The V×810 supports the 12 V DC option.

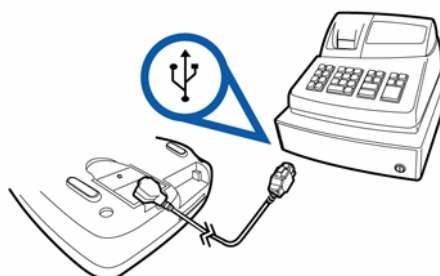


Figure 12 PoweredUSB Connection

Ethernet Connection with External Power Brick

The cable required junction box that provides a standard RJ-45 LAN socket and a DC jack. However, since most hosts do not support peer-to-peer LAN connection to a PIN pad, an additional RJ-45 socket is provided on the junction box to allow a direct connection between V^x810 and the host.

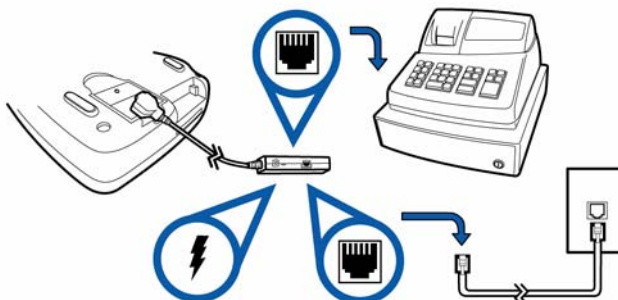


Figure 13 Ethernet Connection with External Power Brick

Power Supply

Not all V^x810 configurations and device contexts require the use of a power supply – VeriFone ships power supplies with the V^x810 as required.

If you have changed the context in which the V^x810 is used or have questions about which power supply should be used, contact your VeriFone representative.



CAUTION Using an incorrectly rated power supply can damage the unit or cause it not to work properly. Use only a power pack with VPN CPS11212-3A-(R) (see [Specifications](#) for detailed power supply specifications).

Before connecting a power supply, disconnect the power pack cord from the power outlet.

Connect and route all cables between the V^x810, ECR, and PC before plugging the power pack cord into a wall outlet or surge protector.



WARNING Do not plug the power pack into an outdoor outlet or operate the V^x810 outdoors. Also, disconnecting power during a transaction can cause transaction data files not yet stored in memory to be lost.



NOTE To protect against possible damage caused by lightning strikes and electrical surges, VeriFone recommends installing a power surge protector.

When the V^x810 has power and an application is loaded, the application starts after the initial VeriFone copyright screen and displays a unique copyright screen. If no application is loaded, **DOWNLOAD NEEDED** appears on the display after the initial VeriFone copyright screen.

Smart Card Reader Use

The smart card transaction procedure can vary depending on the application. Verify the proper procedure with your application provider before performing a smart card transaction.

To Conduct a Smart Card Transaction

- 1 Position the smart card with the gold contacts facing upward (see [Figure 14](#)).
- 2 Insert it into the smart card reader slot in a smooth, continuous motion until it seats firmly.
- 3 Remove the card when the display indicates the transaction is completed.

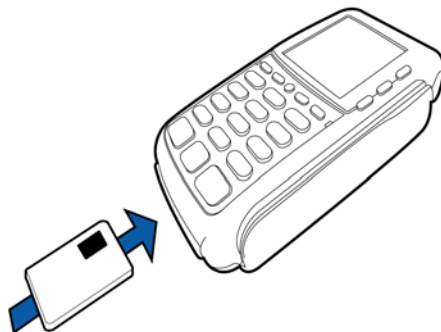


Figure 14 Smart Card Reader Use



Leave the smart card in the card reader until the transaction is completed. Premature removal can void the transaction.

Magnetic Card Reader Use

The Vx810 has a magnetic card reader that uses a triple track stripe reader. This gives the unit greater reliability over a wide range of swipe speeds and operating environments.

To Conduct a Credit/Debit Card Transaction

- 1 Position a magnetic card with the stripe facing the keypad.
- 2 Swipe it through the magnetic card reader.

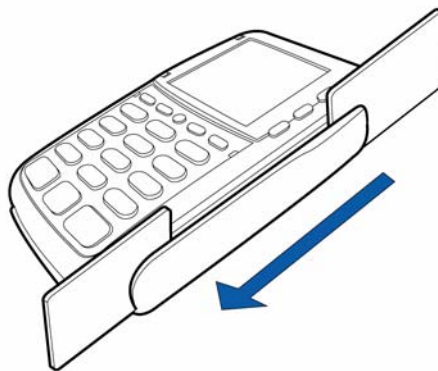


Figure 15 Magnetic Card Reader Use

Contactless Module

The V×810 supports contactless smart card transactions through the V×810 CTLS module. The SD card slot at the back of the V×810 serves as the expansion port for installing the module as an add-on to the traditional magnetic card reader.

Installing the V×810 CTLS Module

To install the V×810 CTLS module:

- 1 Place the device facedown on a soft, clean surface to protect the lens from scratches.
- 2 Remove the SD card slot cover and store it in a safe place where it can be easily retrieved for later use.

NOTE



The SD card cover slot will not be used while the V×810 CTLS module is in place.

- 3 Slide the connector into the SD card slot of the V×810 as illustrated below until you feel it click into place.

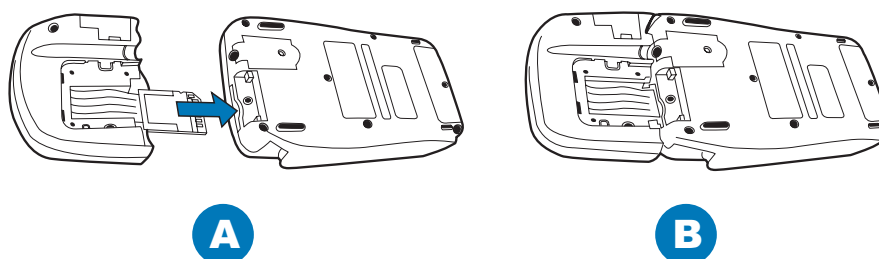


Figure 16 Sliding the V×810 CTLS Module Into Place

WARNING



The mechanism that allows you to feel the connector click into place does not hold the V×810 and the V×810 CTLS module together.

Once the connector is inserted, hold both devices in place while making sure that you do not allow the devices to separate so that the connector does not slip backwards out of the slot.

- 4 Insert the metal plate onto the back of the module and V×810 to hold the devices in place. To do this, hold the metal plate at an angle as shown in the figure below, then slide the tabs on the wide end of the metal plate into the slots of the CTLS module.

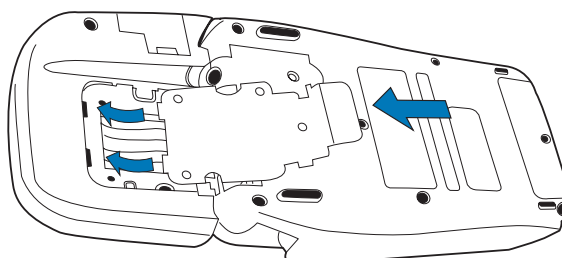


Figure 17 Sliding the Metal Plate into Place

- 5 Slide the tabs on the narrow end of the metal plate down to engage the ears of the V×810.
- 6 Carefully hold both devices and the metal plate in place. Screw fine-thread black machine screw into the V×810 first. Next, install the 3 coarse-thread self tapping screws into the V×810 CTLS module..

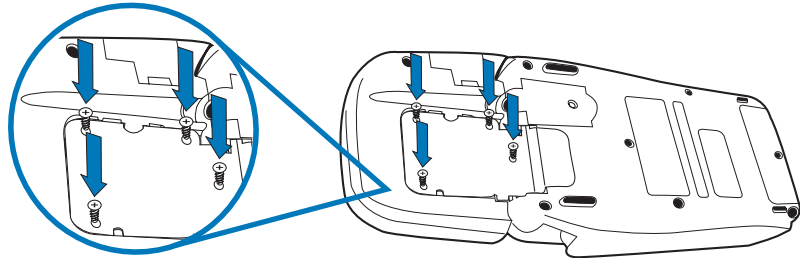


Figure 18 Installing the Screws

WARNING Be careful. The self tapping screws will require a moderate amount of force to install. Be sure to use the proper size screw driver and to securely support the V×810 CTLS module to avoid any possible damage.

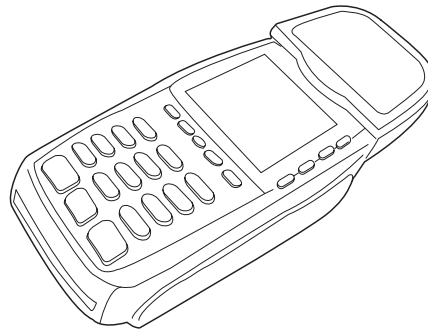


Figure 19 Installed V×810 CTLS Module

NOTE



You can verify if the module is installed properly through the CONTACTLESS DIAGNOSTIC function in System Mode of the V×810.

For more information, please refer to the V×810 Reference Guide, VPN 24964.

Using the V^x810 CTLS Module

The V^x810 CTLS module is only active when signaled by an application for the conduction of a contactless smart card transaction.

To perform a contactless smart card transaction:

- 1 Gently tap the card onto or hold the card (within to 4 cm.) against the surface of the RFID canopy.
- 2 An activated LED visual on the RFID canopy accompanied by a short beeping sound indicates a successful transaction.



Figure 20 **Contactless Smart Card Reader Use**



- Proper care to ensure that the contactless module is working properly includes:
- Preventing the module from coming into contact with metallic surfaces while in use.



CHAPTER 3

Specifications

This chapter discusses power requirements, dimensions, and other specifications of the Vx810.

Unit Power Requirements

- 9 - 12 V DC minimum of 450 mA
- 5 V DC minimum of 500 mA (USB power)

Power Pack

- CPS11212-3A-R
- UL, ITE listed, Class 2, switching power supply
- PS, 12.0 V DC UNIVERSAL 12W

Temperature

- Operating temperature: 0° to 40° C (32° to 104° F)
- Storage temperature: -30° to 60° C (-22° to 140° F)

Humidity

- Relative humidity: 5% to 95%; no condensation

External Dimensions

- Length: 150 mm (5.9 in)
- Width: 85 mm (3.3 in)
- Depth: 32 mm (1.3 in)

Weight

- Unit weight: 0.27 Kg (0.6 lb)
- Shipping weight: 0.850 Kg (1.9 lb)



CHAPTER 4

Maintenance and Cleaning

The V^x810 has no user-serviceable parts.

Clean the PIN Pad

To clean the unit, use a clean cloth slightly dampened with water and a drop or two of mild soap. For stubborn stains, use alcohol or an alcohol-based cleaner. For best results, use a VeriFone Cleaning Kit (refer to the [Accessories and Documentation](#) section).



Never use thinner, trichloroethylene, or ketone-based solvents – they can deteriorate plastic or rubber parts.

Do not spray cleaners or other solutions directly onto the keypad or display.

Card Readers

Do not attempt to clean the card readers. Doing so can void any warranty. For card reader service, contact your VeriFone distributor or service provider.



Service and Support

For V×810 problems, contact your local VeriFone representative or service provider.

For V×810 product service and repair information:

- USA – VeriFone Service and Support Group, 1-800-834-4366, Monday - Friday, 8 A.M. - 8 P.M., eastern time.
- International – Contact your VeriFone representative.

Service Returns

Before returning the V×810 to VeriFone, you must obtain a Merchandise Return Authorization (MRA) number. The following procedure describes how to return one or more V×810 for repair or replacement (U.S. customers only).



International customers, please contact your local VeriFone representative for assistance with your service, return, or replacement.

- 1 Gather the following information from the printed labels (see [Figure 21](#)) on the bottom of each V×810 to be returned:
 - Product ID, including the model and part number. For example, “m108-xxx-xx” and “PTID xxxxxxxx.”
 - Serial number (S/N xxx-xxx-xxx).
- 2 Within the United States, call VeriFone toll-free at 1-800-834-4366.
- 3 Select the MRA option from the automated message. The MRA department is open Monday–Friday, 8 A.M.–8 P.M., eastern time.
- 4 Give the MRA representative the information gathered in [Step 1](#).
If the list of serial numbers is long, you can fax the list, along with the information gathered in [Step 1](#), to the MRA department at 1-727-953-4172 (U.S.).
 - Please address the fax clearly to the attention of the “VeriFone MRA Dept.”
 - Include a telephone number where you can be reached and your fax number.

- You will be issued MRA number(s) and the fax will be returned to you.



One MRA number must be issued for each V*810 you return to VeriFone, even if you are returning several of the same model.

- 5 Describe the problem(s) and provide the shipping address where the repaired or replacement unit must be returned.
- 6 Keep a record of the following items:
 - Assigned MRA number(s).
 - VeriFone serial number assigned to the V*810 you are returning for service or repair (serial numbers are located on the bottom of the unit (see [Figure 21](#)).
 - Shipping documentation, such as air bill numbers used to trace the shipment.
 - Model(s) returned (model numbers are located on the VeriFone label on the bottom of the V*810).

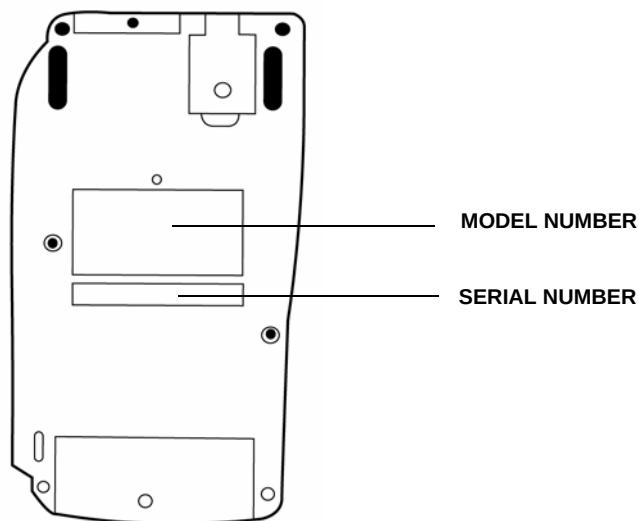


Figure 21 Information Label on Unit Bottom

Accessories and Documentation

VeriFone produces accessories and documentation for the V^x810. When ordering, please refer to the part number in the left column.

VeriFone Online Store at www.store.verifone.com

- USA – VeriFone Customer Development Center, 1-800-834-4366, Monday - Friday, 7 A.M. - 8 P.M., eastern time
- International – Contact your VeriFone representative

Supplementary Hardware

08392-01-(R) Mounting adapter
08368-01-(R) Privacy shield

Data Cables

08361-XX-(R) Connects V^x810 to V^x510, V^x570 and, V^x610 terminals (Mod-10)
08398-XX-(R) Connects V^x810 to ECR with USB Type A
Various others, depending on what they connect to. Contact your local VeriFone representative or service provider to identify the best cable for your needs.

Power Supply

Power packs are optional, except in certain instances (see [Power Supply](#)).

CPS11212-3A-R DC power pack (universal)
07152-02-R AC power cord (US)

Power Cord

07152-xx United States of America

Various others, by country: contact your local VeriFone representative or service provider to identify the best power cord for your needs.

Cleaning Kit

02746-01-(R) VeriFone Cleaning Kit

Contactless Module

The V^x810 supports a CTLS module as an add-on to the traditional magnetic card reader.

Documentation

To learn more about V^x810, refer to the following set of documents:

V ^x 810 Certification and Regulation Sheet	VPN 24960
V ^x 810 Quick Installation Guide	VPN 24961
V ^x 810 Reference Guide	VPN 24964
V ^x 810 Privacy Shield Quick Installation Guide	VPN 24965
V ^x 810 Stand Adapter Quick Installation Guide	VPN 24966
V ^x 810 CTLS Quick Installation Guide	VPN 28601



Troubleshooting Guidelines

This chapter lists typical examples of malfunctions that you may encounter while operating your V×810 and the steps that you can take to resolve them.

The troubleshooting guidelines provided in the following section are included to assist successful installation and configuration of the V×810. If you are having problems operating your V×810, please read these troubleshooting examples. If the problem persists even after performing the outlined guidelines or if the problem is not described, contact your local VeriFone representative for assistance.

NOTE



The V×810 comes equipped with tamper-evident labels. The V×810 contains no user-serviceable parts. Do not, under any circumstance, attempt to disassemble the unit. Perform only those adjustments or repairs specified in this guide. For all other services, contact your local VeriFone service provider. Service conducted by parties other than authorized VeriFone representatives may void any warranty.

CAUTION



Not all units require use of a power supply.

Using an incorrectly rated power supply may damage the unit or cause it not to work properly. Before troubleshooting, ensure that the power supply used to power the unit matches the requirements specified on the back of the unit (see [Specifications](#) for detailed power supply specifications). If not, obtain the appropriately rated power supply before continuing with troubleshooting.

Blank Display

When the V×810 display does not show correct or clearly readable information:

- Check all power and cable connections.
- If the problem persists, contact your local VeriFone service provider.

Keypad Does Not Respond

If the keypad does not respond properly:

- Check the display. If it displays the wrong character or nothing at all when you press a key, follow the steps outlined in [Transactions Fail To Process](#).
- If pressing a function key does not perform the expected action, refer to the user documentation for that application to ensure you are entering data correctly.
- If the problem persists, contact your local VeriFone representative.

Transactions Fail To Process

There are several possible reasons why the unit may not be processing transactions. Use the following steps to troubleshoot failures.

Check Magnetic Card Reader

- Perform a test transaction using one or more different magnetic stripe cards to ensure the problem is not a defective card.
- Ensure that you are swiping cards properly (see [Magnetic Card Reader Use](#)).
- Process a transaction manually using the keypad instead of the card reader. If the manual transaction works, the problem may be a defective card reader.
- If the problem persists, contact your local VeriFone representative.

Check Smart Card Reader

- Perform a test transaction using several different smart cards to ensure the problem is not a defective card.
- Ensure that the card is inserted correctly (see [Smart Card Reader Use](#)).
- Ensure the MSAM cards are properly inserted in the slots and are properly secured (see [Install/Replace MSAM Cards](#)).
- If the problem persists, contact your local VeriFone representative.



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V^x810

Installation Guide

